Requirement: self-prepared image (must be a 2-D image)

Step 1 (read image):
img1 = io.imread('Koala.jpg').copy() #image is saved as rows * columns * 3 array print (img1)
Put the image in the same fold with the python file.
Replace ‘Koala.jpg’ by the designated image file name.

Step 2 (Run):
Run function: KNN(iteration,img,k)

KNN(iteration,img,k)
k: int, number of means
iteration: int, number of times the knn algorithm iterates
img: array, representation of image in an array form

Functions:
randxy()
Generates coordinates within the range of image pixel

pick(k)
Return k pair of random values within the range of image pixel

getKmean(k)
Return random picked coordinate values of pixels from array form of image

getRGB(kpos,img)
kpos: array, coordiate value,
img: array, array represented image
Return the corresponding RGB value on img from coordinate pairs

KNN(iteration,img,k)
k: int, number of means
iteration: int, number of times the knn algorithm iterates
img: array, representation of image in an array form
Return an image array processed by knn algorithm.